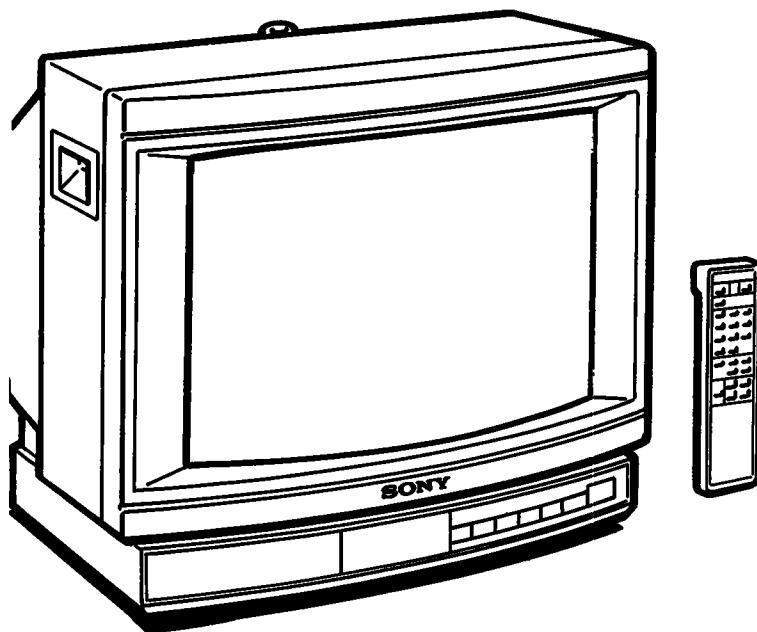


TRINITRON® Color TV**KV-21GPX****Operating Instructions**

Before operating the unit, please read this manual thoroughly and retain it for future reference.



Warning

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

Dangerously high voltages are present inside the unit. Do not open the cabinet. Refer servicing to qualified personnel only.

Contents

Precautions	2
Features	2
Parts identification	3
Antenna connection	5
VHF indoor antenna	5
External antenna	5
Power connection	6
VTR connection	6
Presetting the receivable channels	7
Automatic presetting	7
Manual presetting	8
Skipping unused program positions	9
Watching TV programs	10
Troubleshooting	12
Specifications	13

Precautions

Safety

- Operate the unit only on 110 – 240 V AC, 50/60 Hz.
- Should any liquid or solid object fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.
- Unplug the unit from the wall outlet if it is not going to be used for several days or more. To disconnect the cord, pull it out by the plug. Never pull the cord itself.

Installation

- To prevent internal heat build-up, do not block the ventilation openings.
- Do not install the unit in a hot or humid place or in a place subject to excessive dust or mechanical vibration.

Cleaning

Clean the unit with a slightly damp soft cloth. Use a mild household detergent. Never use strong solvents such as thinner or benzine as they might damage the finish of the cabinet.

As a safety precaution, unplug the unit before cleaning it.

Repacking

Retain the original carton and packing materials for safe transport of this unit in the future.

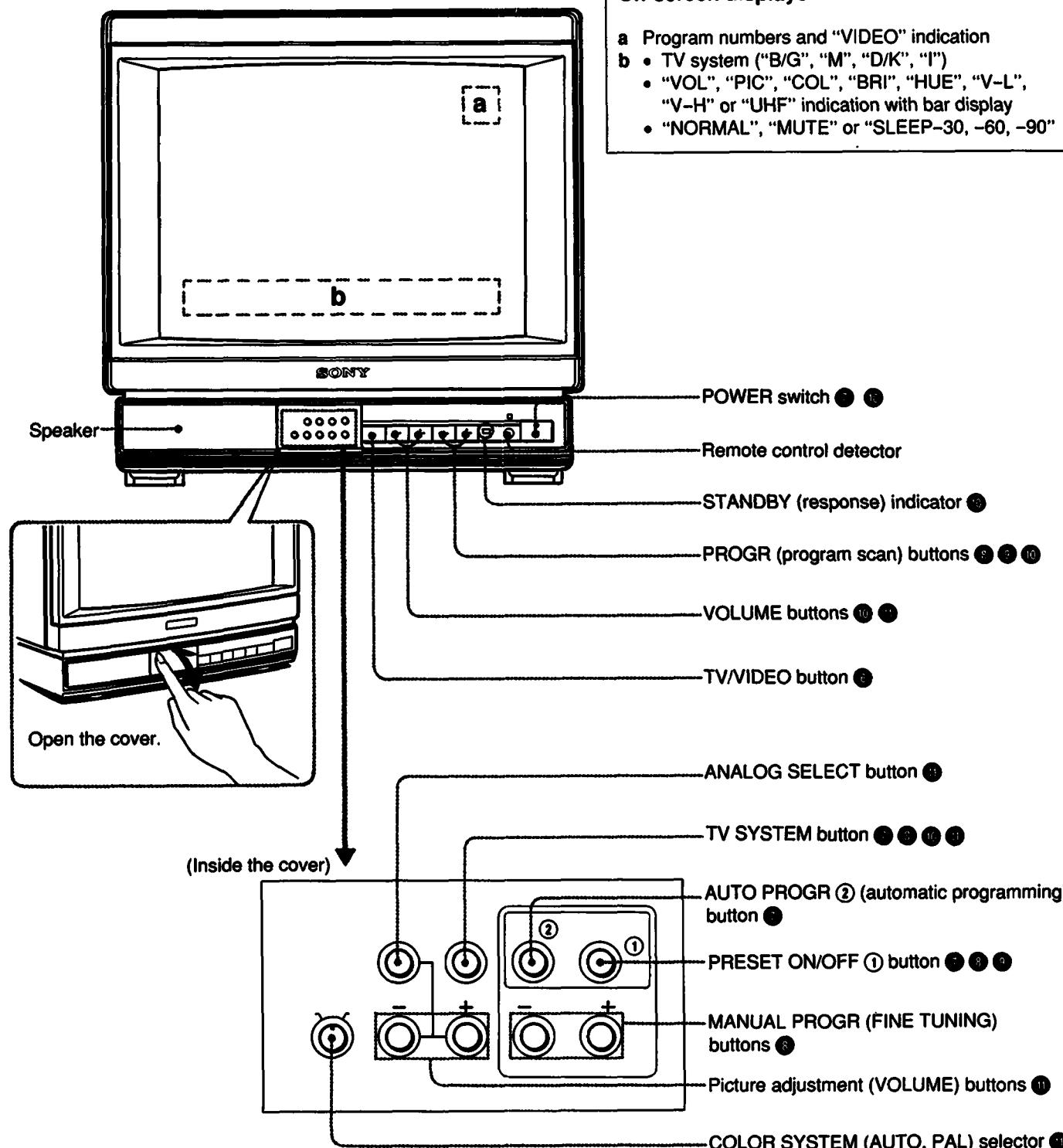
Features

- Remote-controlled Trinitron color television
 - New Black-tinted Trinitron picture tube absorbs most ambient light and remarkably improves picture contrast.
 - New PanFocus™ Gun delivers clear and crisp images with remarkably improved sharpness all the way to the screen's edges and corners.
 - Capable of receiving a combination of four TV systems and four color systems including NTSC^{4.3*} color system.
 - Capable of preset tuning of up to 30 programs for regular VHF, UHF and cable TV broadcasts.
 - Both automatic and manual programmings are available.
 - Built-in video input jacks for better quality picture of the connected VTR or video disc player, etc.
 - On-screen displays
 - Sleep timer automatically turns off the TV after approximately 30, 60, or 90 minutes.
- * A signal of NTSC^{4.3} is obtained by playing back NTSC-recorded video cassettes with a video tape recorder player especially designed for use with this system.

Parts Identification

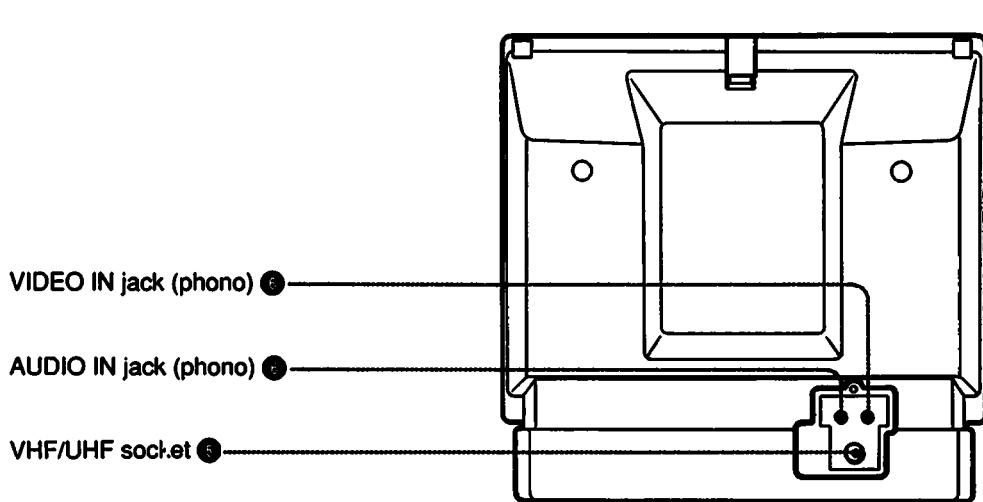
Refer to the pages indicated in ● for details.

Front

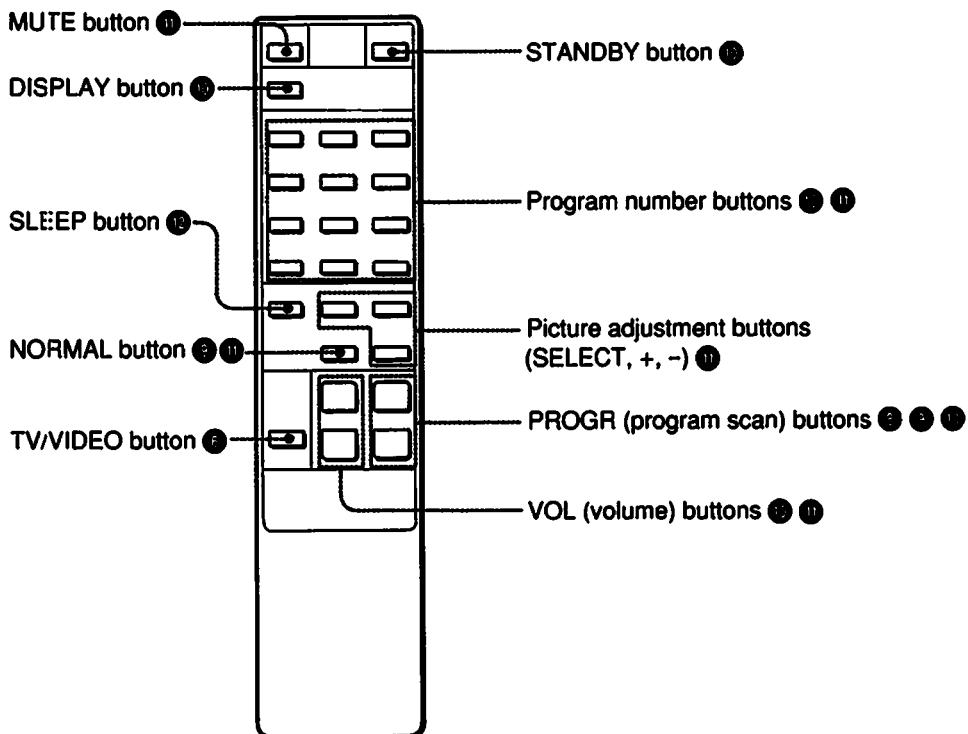


Parts Identification

Rear

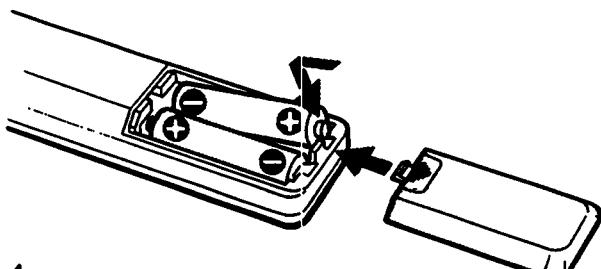


Remote commander RM-687C



Battery installation

Insert the supplied two R6 (size AA) batteries with correct polarity.



Notes on batteries

- In normal operation, batteries will last up to half a year. If the commander does not operate properly, the batteries might be exhausted. Replace them with new ones.
- To avoid damage from possible battery leakage, remove the batteries for extended unused periods.

Antenna Connection

VHF Indoor Antenna

Use the supplied telescopic dipole antenna.

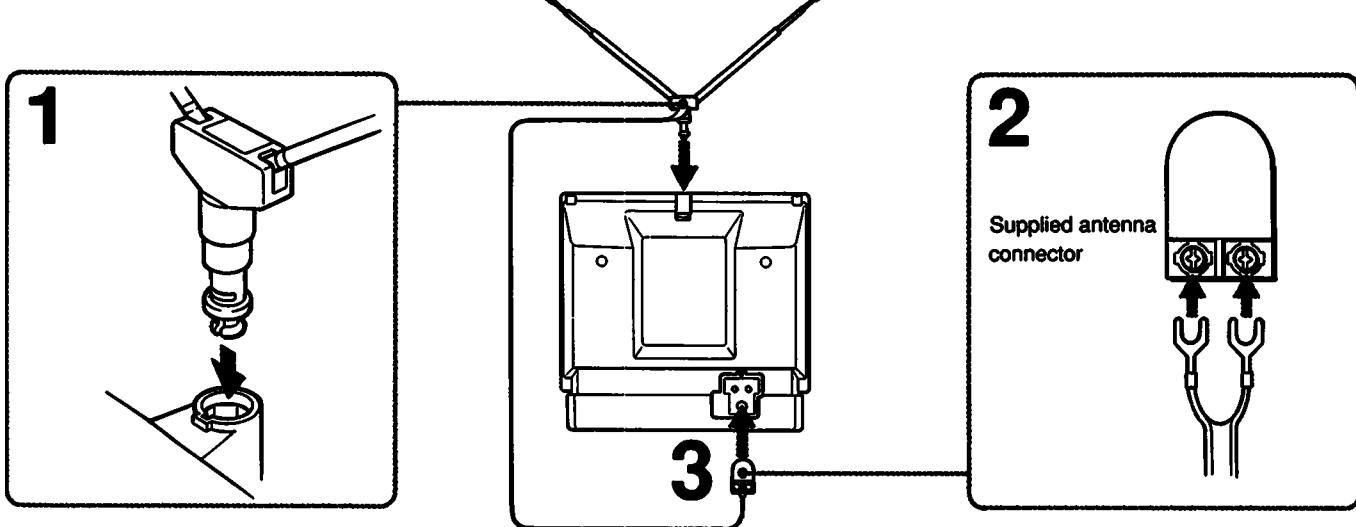
1 Insert the antenna until it clicks.

2 Loosen the screws on the supplied antenna connector. Insert the lugs of the antenna and tighten the screws.

3 Plug the connector into the VHF/UHF socket.

Antenna adjustment

Adjust the length, direction and angle of both elements symmetrically until the picture is clearest.



External Antenna

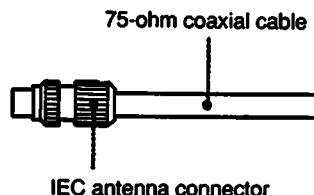
For UHF, use an external antenna.

Also, if you cannot obtain satisfactory VHF reception with an indoor antenna, connect an external antenna.

To connect a VHF antenna or a combination VHF/UHF antenna – round 75-ohm coaxial cable

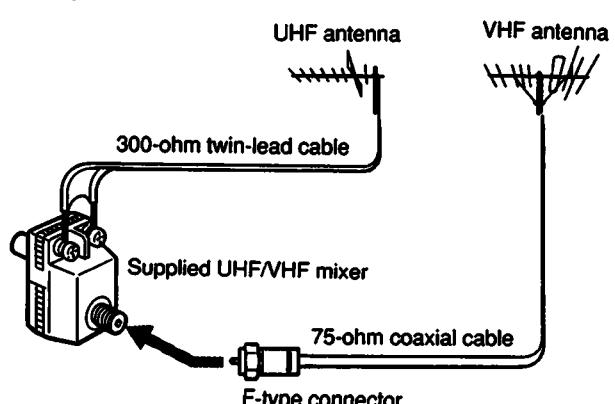
1 Attach the antenna end to an IEC antenna connector (commercially available).

2 Plug the connector into the VHF/UHF socket.



To connect both VHF and UHF antennas

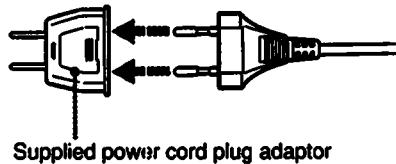
1 Attach the antenna ends to the supplied UHF/VHF mixer.



2 Plug the mixer into the VHF/UHF socket.

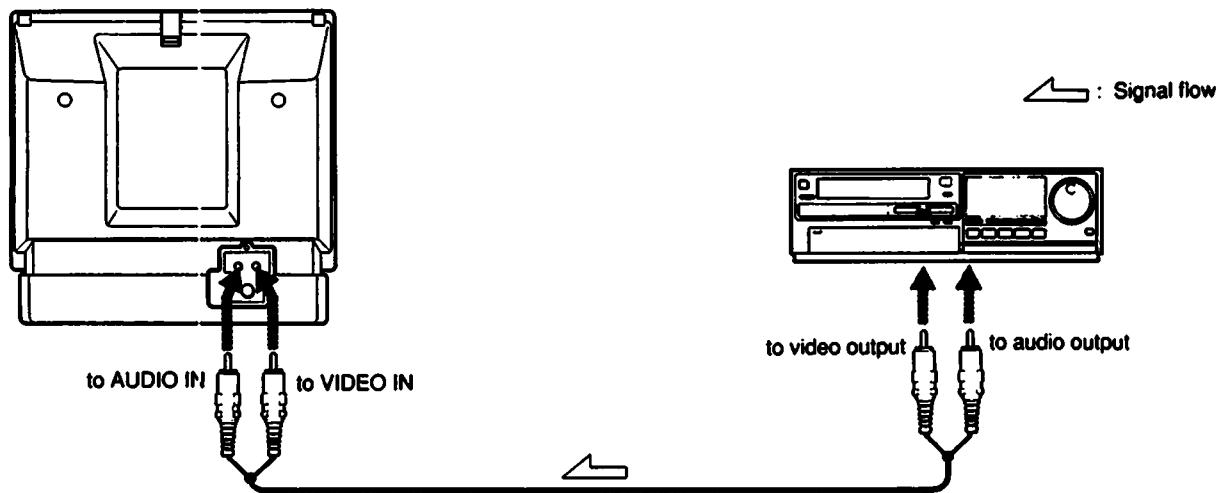
Power Connection

Plug the power cord into the wall outlet after antenna connections have been completed.
If the plug does not fit into the wall outlet, use the supplied power cord plug adaptor.



VTR Connection

Connect the VIDEO IN jack to the video output of a VTR for video signal.
Connect the AUDIO IN jack to the audio output of a VTR for audio signal.
Use a commercially available connecting cords.



To watch the VTR picture

- 1 Press the TV/VIDEO button on the TV or on the commander.
"VIDEO" appears on the screen.
- 2 Set the connected VTR in playback mode.

To watch the TV picture, press the TV/VIDEO, program number or PROGR button again so that the program number appears.

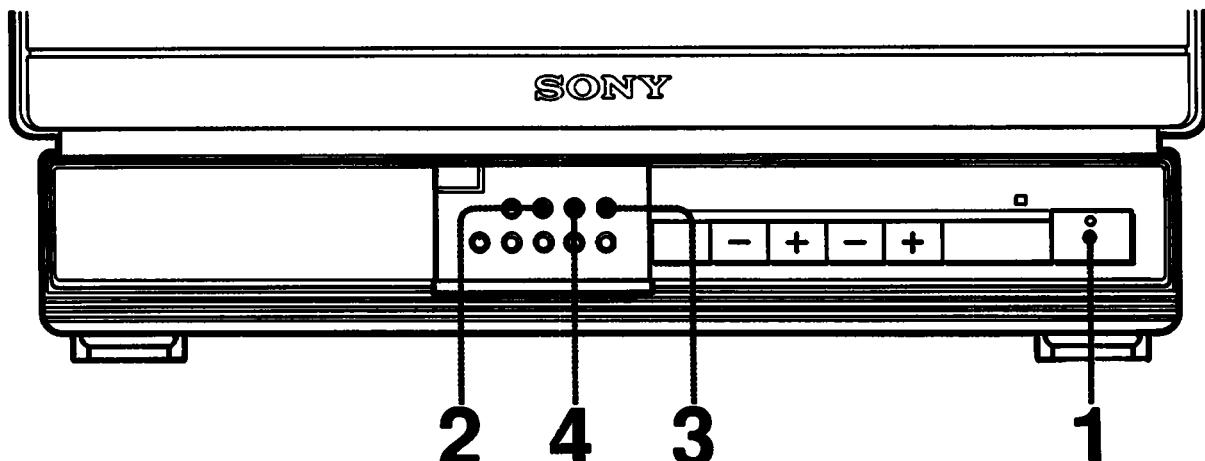
Note

Keep the VTR away from the TV if the picture or sound is affected.
For operation, refer to the instruction manual furnished with the VTR.

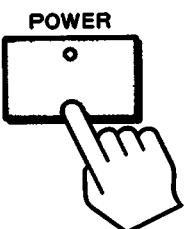
Presetting the Receivable Channels

on next page

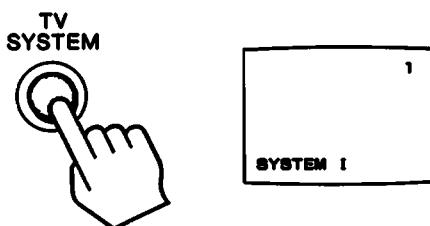
Automatic Presetting



1 Turn the TV on.

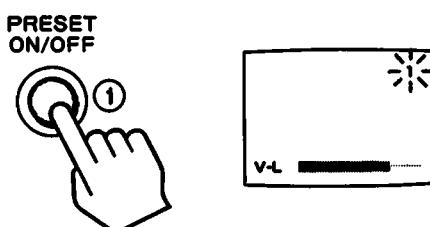


2 Select the TV system. (See page 8.)



3 Press PRESET ON/OFF ①.

Program number on the screen blinks.
A colored segmented bar appears to indicate
approximate location of the channel being tuned
in.



4 Press AUTO PROGR ②.



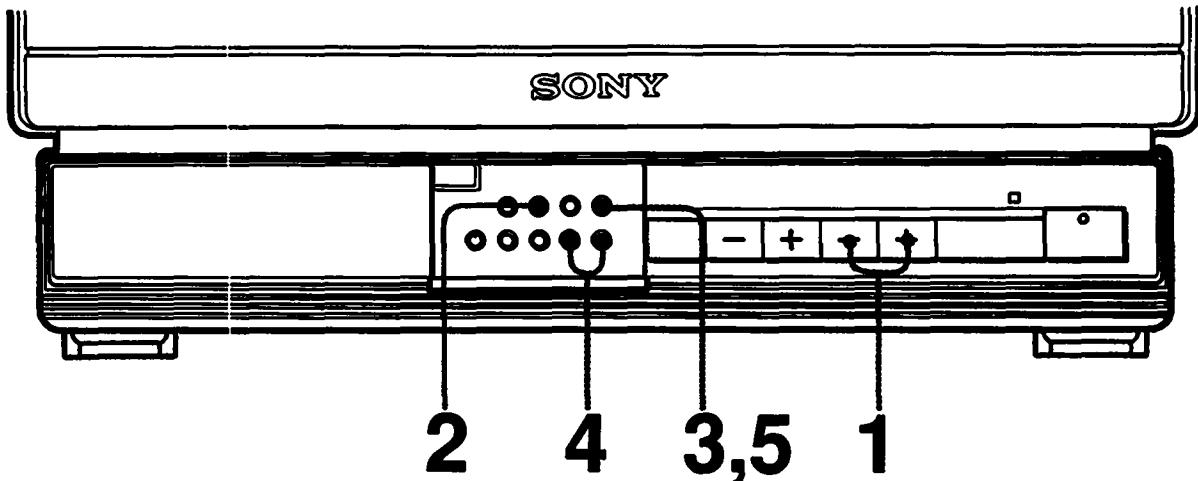
Up to 30 receivable channels are preset in numerical sequence beginning from program number 1. When all receivable channels are preset, the program number 1 lights steadily on the screen and the programming mode is automatically released.



While presetting, the program numbers blink.

Presetting the Receivable Channels

Manual Presetting



To change the order of a channel which was set earlier, use manual presetting.

Also use manual presetting to set channels with weak signals which were not received by automatic presetting. Only channels with fairly strong signals can be received by automatic presetting.

- 1** Press PROGR +/- to select the desired program position.
- 2** Set the TV system.
- 3** Press PRESET ON/OFF.
Program number on the screen blinks.
A colored segmented bar appears to indicate approximate location of the channel being tuned in.
- 4** Press MANUAL PROGR (FINE TUNING) repeatedly until the desired channel appears.
+: to scan higher-frequency channels
-: to scan lower-frequency channels
- 5** Press PRESET ON/OFF again.

Repeat steps 1 through 5 for other desired channels.

Note

While presetting receivable channels automatically or manually, do not press buttons on the commander. Otherwise, presetting will be stopped. If this happens, return to the beginning of the presetting operation.

Selecting the TV system

Select the proper TV system that can be received in your area.
Each time TV SYSTEM is pressed, the indications appear in the following order:

B/G → M → D/K → I



B/G :West European TV system
M :American TV system
D/K :East European TV system
I :British TV system

Notes

- If more than one TV system can be received in your area, select the main TV system of the area. All receivable channels can be preset in the selected TV system. Resetting of TV system is described in "Watching TV programs".
- Wrong setting of the TV system causes the distorted, or noisy sound, or abnormal color.
- The TV system setting is memorized for each program position. Therefore, the TV system can be reset for only the desired program position without affecting other program positions.

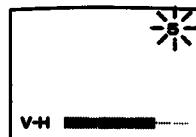
Skipping Unused Program Positions

After presetting channels, unused or undesired program positions can be skipped.

1 Turn the TV on.

2 Press PRESET ON/OFF.

Program number on the screen blinks.
A colored segmented bar appears to indicate
approximate location of the channel being
tuned in.



3 Press PROGR +/- to select the position to be skipped.

4 Press NORMAL on the commander.

Repeat steps 3 and 4 for other positions to be skipped.

5 Press PRESET ON/OFF.

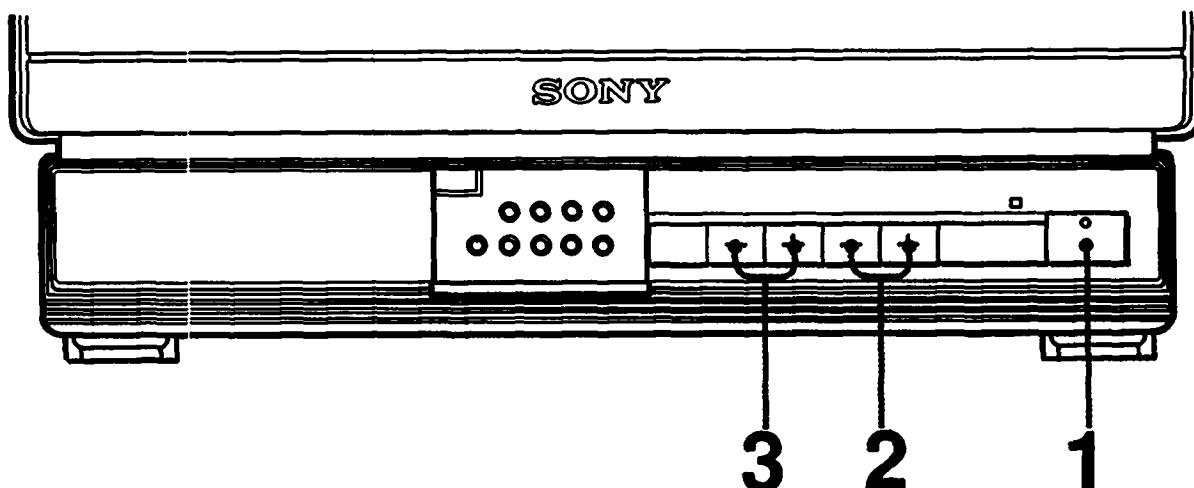
Restoring the skipped channel

1 Select the position to be restored using the program number button on the commander.

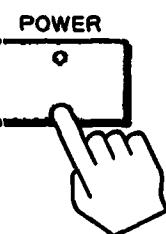
2 Perform steps 2 through 5 in "Manual presetting".

Otherwise, perform automatic presetting and reset all channels.

Watching TV Programs



1 Turn the TV on.



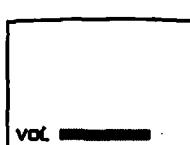
2 Select the desired channel.

for a lower channel - PROGR + for a higher channel



3 Adjust the volume.

for less volume for more volume



Commander	TV
Press STANDBY.	—
Press a program number or PROGR + or - button.	Press PROGR + or - button.
—	Press POWER.
Press DISPLAY.	—
Press DISPLAY.	—
Press DISPLAY.	—

The STANDBY (response) indicator blinks when the button on the TV or on the commander is pressed. It lights steadily when the TV is turned off with the STANDBY button on the commander.



Picture and sound adjustments

Item to be adjusted	Press		On-screen display
	Commander	TV	
Sound level	VOL	VOLUME	VOL
Picture contrast	SELECT* →	ANALOG SELECT* → (VOLUME)	PIC
Color Intensity	SELECT* →	ANALOG SELECT* → (VOLUME)	COL
Brightness	SELECT* →	ANALOG SELECT* → (VOLUME)	BRI
Hue (NTSC color system only)	SELECT* →	ANALOG SELECT* → (VOLUME)	HUE
To reset PIC, COL, BRI, and HUE to factory-set levels	NORMAL	—	NORMAL
To mute the sound	MUTE	—	MUTE
To restore the sound	MUTE	—	—
	VOL	VOLUME	VOL

* SELECT button on the commander/ANALOG SELECT button on the TV

Each time SELECT or ANALOG SELECT is pressed, PIC (picture contrast), COL (color intensity), BRI (brightness) or HUE appears in this order.

Turn on the item to be adjusted and press the + or - button. Pressing the + or - (VOLUME) button on the TV without pressing ANALOG SELECT controls the volume.

Setting TV SYSTEM

If the sound is distorted or noisy, or color is abnormal while receiving program through the VHF/UHF terminal, press TV SYSTEM until a clear sound or normal color is obtained. The TV system set by this operation is memorized for the program position.

Note

TV SYSTEM setting has no effect on the signal input through the VIDEO IN and AUDIO IN jacks.

Setting COLOR SYSTEM

Normally set COLOR SYSTEM to AUTO. In case of getting abnormal color reproduction (for example, if the picture turns red or blue) while receiving weak or inferior quality PAL color system signal, set COLOR SYSTEM to PAL. The picture color will become normal.

On-screen display

The following on-screen displays appear:

When the power is turned on, or when the program is changed	Program number
When the TV/VIDEO button is pressed	Program number or VIDEO
When the DISPLAY button is pressed	Program number and TV system, or VIDEO. The TV system display will disappear after a few seconds.

To turn off the on-screen display, press the DISPLAY button.

Notes on the commander

- For selecting programs, press the corresponding number button. For program numbers 10 through 19, press "1-", and for program numbers 20 through 29, press "2-" for ten-digit. Then press the required number for the unit while STANDBY (response) indicator and channel display on the screen are blinking (for approx. 5 seconds).
- Be sure that there are no obstructions between the commander and the TV.
- Operable range is limited. The shorter the distance between the commander and the TV, the wider the angle within which the commander can control the TV.

Turning off the TV at the desired time – sleep function

The TV can be automatically turned off after approximately 30, 60, or 90 minutes.

Each time SLEEP on the commander is pressed, the indication on the screen changes as follows:

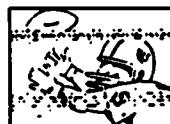
SLEEP-30 → SLEEP-60 → SLEEP-90 → Sleep off (no indication)

Example: To turn off the TV after 60 minutes
Press SLEEP until SLEEP-60 is displayed on the screen.



To cancel the sleep function, press SLEEP until no indication is displayed on the screen.

Disturbances in picture and sound can often be eliminated by checking the symptoms and following the suggestions listed below. If the problem still cannot be solved, contact your nearest service facility.

Symptom	Check and adjust
No picture (screen not lit), no sound	<ul style="list-style-type: none"> • Plug the TV into a working outlet. • Press POWER on the TV. • If the STANDBY indicator lights, press a program number button on the commander or PROGR button (+ or -) on the TV. • Check the antenna. • Check the VTR connection.
Poor or no picture (screen not lit) but good sound	<ul style="list-style-type: none"> • Adjust brightness, color intensity or picture contrast. • Press NORMAL on the commander. • Check the VTR connection.
Good picture but no sound	<ul style="list-style-type: none"> • Press VOLUME + on the TV or VOL + on the commander. • If MUTE is displayed on the screen, press MUTE on the commander again. • Check the VTR connection.
Good picture but noisy sound	<ul style="list-style-type: none"> • Check the TV SYSTEM setting.
No color or abnormal color for color programs	<ul style="list-style-type: none"> • Adjust color intensity. • Check the TV SYSTEM setting. • Check the COLOR SYSTEM selector.
Snow and noise	<ul style="list-style-type: none"> • Fine-tune the channel manually. • Check the antenna. • Check the TV SYSTEM setting.
Dotted lines or stripes	<p>This may be caused by local interference (e.g. cars, neon signs, hair dryers, etc.). Adjust the antenna for minimum interference.</p> 
Double images or "ghosts"	<p>This may be caused by reflections from nearby mountains or buildings. A highly directional antenna may improve the picture.</p> 

Specifications

Television system M, B/G, I, D/K
 Color system PAL, SECAM, NTSC_{3.58},
 NTSC_{4.43}

Channel coverage

Television system	M	B/G	I	D/K
Low VHF band	A2 - A6	E2 - E4	-	R1 - R5
High VHF band	A7 - A13	E5 - E12	-	R6 - R12
Cable TV	A - 2 ~ W	-	-	-
UHF	A14 - A79	E21 - E69	B21 - B68	R21 - R60

Picture tube	Trinitron tube Approx. 54 cm (21 inches) 100-degree deflection (Approx. 51 cm picture measured diagonally)
Antenna	75-ohm standard coaxial socket
Audio output	2 W
Inputs	VIDEO IN/AUDIO IN jacks: phono jacks Video: 1 Vp-p, 75 ohms Audio: 500 mVrms, high impedance
Power requirements	110 - 240 V AC, 50/60 Hz
Speaker	Approx. 12 x 6 cm
Power consumption	98W
Dimensions	Approx. 511 x 484 x 498 mm (w/h/d) (20 ³ /8 x 19 x 19 ¹ /4 inches)
Weight	Approx. 23 kg (51 lb)
Accessories supplied	RM-687C Remote Commander (1) R6 (size AA) batteries (2) VHF telescopic dipole antenna (1) Antenna connector (300 - 75 ohm matching transformer is built in.) (1) UHF/VHF mixer (1) AC power cord plug adaptor (1)

Design and specifications are subject to change without notice.